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EXAMINER
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COLBERT, ELLA

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/547,191

Applicant(s)

NORI ET AL.

Examiner

Ella Colbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26-35 and 38-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 and 26-35 is/are allowed.
- 6) ☒ Claim(s) 38-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. Claims 1-24, 26-35, and newly added claims 38-43 are now pending. Claims 38-43 have been added in this communication filed 08/26/03 as Amendment H, paper no. 33.
2. The RCE, paper no. 28 and Amendment G, paper no. 29 filed 07/23/03 was not entered. A Notice of Non-Compliance was issued on 08/13/03 as paper no. 30.
3. A Copy of the Request for Continued Examination (RCE) under 37 CFR § 1.114 was entered as paper no. 31 and Amendment Copy was entered as paper no. 32 filed 04/14/03.

### ***Drawings***

4. New corrected drawings are required in this application because the newly filed drawings are objected to by the Draftsperson under 37 CFR 1.84 or 1.152 for the reasons indicated on PTO Form -948 attached to this Office Action. New formal drawings are requested in compliance with this objection. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Allowable Subject Matter***

5. Claims 1-24 and 26-35 now renumbered 1-34 are allowable in light of the Applicants' arguments and in light of the prior art made of record.
6. The following is an Examiner's Statement of Reasons for Allowance:

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The present Application has been thoroughly reviewed. Upon searching a variety of databases, the Examiner respectfully submits that –reading data from one or more rows of the set of one or more tables, wherein the one or more rows do not store an object id used for modeling the data in the one or more rows as an object that belongs to the object class, reading database metadata that defines how to derive object ids from values in one or more columns, and generating in the manner defined by the database metadata, an object id derived from one or more values in the one or more columns in the one or more rows –in a method of independent claim 1, reading first database metadata that indicates how to generate a column object from one or more columns and reading a first set of data from the one or more columns of a plurality of rows from the set of one or more tables, wherein the second database metadata defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns of independent claim 7, database metadata that indicates how to derive object ids from values in one or more columns and a set of one or more tables, the set of one or more tables containing one or more rows, wherein the one or more rows do not store an object id for modeling the data in the one or more rows as an object that belongs to the object class – a system of independent claim 16, first database metadata that defines how to generate a column object from one or more columns and second database metadata that defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns –a system of independent claim 19, a computer readable medium carrying one or more sequences of one or more

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instructions for presenting data from a set of one or more tables as a set of objects that belong to an object class, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of reading data from one or more rows of the set of one or more tables, wherein the one or more rows do not store an object id used for modeling the data in the one or more rows as an object that belongs to the object class and reading database metadata that defines how to derive object ids from values in one or more columns in independent claim 20 and a computer-readable medium carrying one or more sequences of one or more instructions for presenting, as an object, data from a set of one or more tables residing in one or more database, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of reading first database metadata that defines how to generate a column object from one or more columns and reading a first set of data from the one or more columns of a plurality of rows from the set of one or more tables, wherein second database metadata defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns in independent claim 26, is not taught by the prior art of record (PTO-892, 1449).

Therefore, all pending claims are hereby allowed.

Since allowable subject matter has been indicated, Applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings acceptability and to resolve

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any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 38-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 38 recites "A method for deriving object ids for data in a table...". It is unclear what "table" Applicant is claiming in claims 38-43. Does Applicant mean "a relational table" or "an object oriented table" or a "database table" or a "metadata table" or an "object-relational table"? In claim 38, recites "maintaining, separate from the table definition, ...". It is unclear what is being maintained separate from the table definition". Does Applicant mean the "metadata is maintained separate from the database table definition"? It is suggested Applicant add "computer implemented" after "A" and before "method" in the preamble of claims 38 and 41.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,907,847) Goldberg.

With respect to claim 38, Goldberg teaches, A method for deriving object ids for data in a table that is managed by a database server and is defined by a table definition, comprising: maintaining, separate from the table definition, metadata that indicates how to derive object ids from values stored in the table (col. 6, lines 24-64).

Goldberg fails to teach, the database server deriving object ids for the data in the table based on the metadata, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the database server derive the object ids for the data in the table based on the metadata and to modify in Goldberg in view of Goldberg's teachings of metadata, a database server, and object ids because such a modification would allow Goldberg to have a table that contains an object identifier with metadata including table relations to define each table in the DBMS.

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With respect to claim 39, Goldberg teaches, The method of Claim 38, further comprising the step of generating, based on a particular object id of said object ids, an object reference (col. 2, lines 22-52).

With respect to claim 40, Goldberg teaches, The method of Claim 39, further including the steps of: presenting particular data from said table as an object belonging to an object class and having said particular object id (col. 3, lines 21-38); said database server executing a database statement that identified said object reference (col. 6, lines 41-64); and wherein execution of said database statement causes the database server to access said particular data as said object (col. 6, lines 65-67 and col. 7, lines 1-21).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,600,005) Hoover et al, hereinafter Hoover.

With respect to claim 41, Hoover teaches, The method for presenting data from a set of one or more tables in a database, the method comprising the steps of: reading data from one or more rows of the set of one or more tables based on an object view that is defined by database metadata and that is based on the set of one or more tables, the object view defining a presentation of data as a set of objects that reside in said database, the set of one or more tables including at least one relational table (col.



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14, lines 66-67, col. 15, lines 1-31, col. 25, lines 16-29, fig. 8 (step 130 shows one or more tables), col. 50, lines 42-62, fig. 23 (shows a display screen that can be read).

Hoover fails to teach, accessing said data from one or more rows as a set of objects that reside in said database, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to access said data from one or more rows as a set of objects that reside in said database and to modify in Hoover in view of Hoover's teachings of a table-based data model and an object-based relational model because such a modification would allow Hoover to have a computer system with a row of information about an individual format and another system may have information about the same individual in a different format with each characteristic constituting a separate field or attribute of a row in a relational or table-based model.

14. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoover in view of (US 5,907,847) Goldberg.

With respect to claim 42, Hoover fails to teach, The method of claim 41, further including the step of said database server executing a database statement at a database server, wherein execution of said database statement by said database server causes said database server to access said data from one or more rows.

Goldberg teaches, The method of claim 41, further including the step of said database server executing a database statement at a database server, wherein execution of said database statement by said database server causes said database server to access said data from one or more rows (col. 2, lines 9-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the step of

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said database server executing a database statement at a database server, wherein execution of said database statement by said database server causes said database server to access data from one or more rows and to modify in Hoover because such a modification would allow Hoover to have a system that uses tables that contains information that describes the structure of the data in the database management system.

With respect to claim 43, Hoover fails to teach, The method of claim 42, wherein: said database statement includes an object reference to a particular object of said set of objects; and wherein execution of said database statement by said database server causes said database server to access said data from one or more rows.

Goldberg teaches, The method of claim 42, wherein: said database statement includes an object reference to a particular object of said set of objects; and wherein execution of said database statement by said database server causes said database server to access said data from one or more rows (col. 3, lines 20-67 and col. 4, lines 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the said database statement include an object reference to a particular object of said set of objects and wherein execution of said database statement by said database server causes said database server to access said data from one or more rows and to modify in Hoover because such a modification would allow Hoover to a Database Management Server to access separate sources to obtain information and consistency between the DBMS server and the client.

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***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Attaluri et al (US 5,897,634) disclosed SQL data in an object server.

Carino, Jr. (US 5,754,841) disclosed an object-relational database management system.

Althoff et al (US 6,374,252) disclosed an object-oriented model database and relational database structures.

Caron et al (US 6,449,659) disclosed an object model.

***Inquiries***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday from 6:30 am -5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

  
E. Colbert

November 10, 2003